REMARKS

Upon entry of the instant amendment, claims 1-9 are pending. Claims 1, 5, and 7-9 have been amended to more particularly point out the applicant's invention. It is respectfully submitted that upon entry of the instant amendment and consideration of the remarks below that the application is in condition for allowance.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claims 1-9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Park, U.S. Patent No. 5,635,820 ("Park") in combination with Schousek, et al., U.S. Patent No. 6,222,370 ("Schousek"). It is respectfully submitted that neither the Park nor Schousek patents disclose or suggest a battery charge indicator as recited in the claims at issue. Specifically, claim 1, as amended, recites, in combination:

> "a sensing circuit for sensing when the charging current to a battery is equal to a first predetermined value less than the value of the charging current when said battery is fully charged and generating a first-charge indication signal representative of a near full state of charge as a function of said charging current; ..."

The Park application teaches a well known battery charging termination technique based on a temperature cut-off (TCO). In particular, after the temperature is sensed and determined to be below the battery temperature limit, the Park system senses the charging current to determine if it is below a predetermined value. As indicated in the passage in the Park patent at column 4, lines 64 to column 5, line 5 of the Park patent:

> "when the sensed charging current I is below the charging limit I_s. (sic) the charge control part 40 finishes the full charging sensing routine according to the constant voltage/constant current charging method after stopping (S350), the operation of the battery charging part by determining the full charging state in

> which the current is reduced below the predetermined value as a result of converting into the constant voltage charging."

Although not defined in the Park patent, a charging limit current I_s refers to the value of the charging current during a constant current mode of operation. During a constant current mode of operation, the state of battery charge is determined by the TCO method (Park patent, column 5, lines 6-9). In a constant voltage mode of operation, the charging current is measured and compared with a charging limit current I_s. The passage referred to in the Office Action (i.e. column 4, lines 64 through column 5, line 5) simply refers to the fact that during a constant voltage mode of operation, the system disclosed in the Park patent simply continues charging the battery while checking the temperature and also whether the charging current is below the constant current value of the charging current. The Park patent does not disclose or suggest selecting a value of charging current that is representative of a near full state of charge and generating a charge indication signal representative of the near full state of charge as a function of the charging current, as recited in the claims at issue. As such, the applicant respectfully disagrees with paragraph 2 of the Detailed Action which states that Park discloses a sensing circuit for generating a signal representative of a near full state of charge. Rather, it should be clear the Park patent discloses the use of a generally common charge termination technique for charging a constant current/constant voltage battery cell, such as a lithium ion battery cell and simply checks the charging current during a constant voltage mode of operation to determine if it is less than the constant current value in order to finish charging the battery during a constant voltage mode of operation.

The Schousek patent discloses a battery voltage indicator providing indications of the cell voltage at different levels (i.e., zero percent, 25%, 50%, 75%, and 100%) (Schousek patent, column 6, line 50). Column 6 of the Schousek patent actually teaches away from the invention and teaches providing an indication of the battery charge based on voltage measurement ("ADC energy source monitor 10, constructed in accordance with the present invention, monitors the voltage of a DC energy source here shown as a battery 9." Schousek, et al., column 5, lines 21-24). Thus, it should be clear that the Schousek, et al. patent is unlike the invention and provides

an indication of the state of battery charge based solely on battery cell voltage and not charging current.

For all of the above reasons, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-9.

Respectfully submitted,

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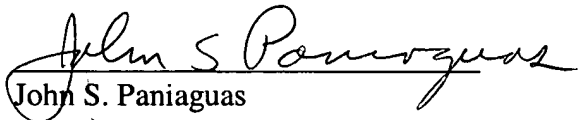
By: 

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